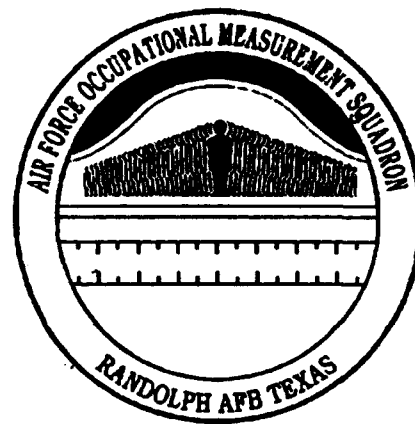


AD-A280 662



UNITED STATES  
AIR FORCE



# OCCUPATIONAL SURVEY REPORT

DTIC  
ELECTE  
JUN 27 1994

DTIC QUALITY INSPECTED 8

IN-FLIGHT REFUELING

AFSC 1A0X1

AFPT 90-112-980

MAY 1994

OCCUPATIONAL ANALYSIS PROGRAM  
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON  
AIR EDUCATION and TRAINING COMMAND  
1550 5th STREET EAST  
RANDOLPH AFB, TEXAS 78150-4449

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## **PREFACE**

This report presents the results of a detailed Air Force Occupational Survey of the In-Flight Refueling Operators career ladder (Air Force Specialty Code (AFSC) 1A0X1, formerly AFSC 112X0). Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products upon which this report is based are available for the use of operations and training officials.

The survey instrument was developed by Captain Robert H. Babin, Inventory Development Specialist, with computer programming support furnished by Ms Olga Velez. Ms Raquel A. Soliz provided administrative support. First Lieutenant Peter M. Berg, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Major Randall C. Agee, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the Air Force Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449 (DSN 487-6623).

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## SUMMARY OF RESULTS

1. Survey Coverage: The In-Flight Refueling career ladder (AFSC 1A0X1) was surveyed to obtain current job and task data. Survey results are based on data gathered from 549 respondents. This represents 46 percent of the total assigned population.
2. Specialty Jobs: Structure analysis of the AFSC 1A0X1 data reflects a very homogeneous job structure. Although nine jobs were identified in the sample, all of the jobs involved performing a common core of in-flight refueling functions. The primary differences among jobs were the performance of additional administrative tasks, such as training, scheduling, program management, and standardization/evaluation-related duties.
3. Career Ladder Progression: Personnel at all skill levels perform many aircrew and refueling tasks in common. This is typical of all aircrew specialties. As personnel progress in the specialty, they tend to assume supervisory and other additional tasks, while still continuing to perform routine aircrew and refueling tasks.
4. Specialty Descriptions: The current In-Flight Refueling Operators AFMAN 36-2108 specialty job descriptions accurately depict the nature of the respective jobs identified in this study.
5. Training Analysis: Comparison of the 1A0X1 STS with occupational survey data identified very few areas needing review.
6. Implications: The In-Flight Refueling career ladder structure has remained relatively stable since the last OSR was published in March 1983. The specialty jobs have a common core of technical boom operator tasks performed by most of incumbents. Also, job attitudes are extremely positive among incumbents.

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**OCCUPATIONAL SURVEY REPORT (OSR)  
IN-FLIGHT REFUELING SPECIALIST LADDER  
AFSC 1A0X1 (Formerly AFSC 112X0)**

**INTRODUCTION**

This is a report of an occupational survey of the In-Flight Refueling Operator career ladder completed by the Air Force Occupational Measurement Squadron. This survey was conducted to obtain current job and task data. The last In-Flight Refueling OSR was published in March 1983.

**Background**

Since its creation in 1954, the In-Flight Refueling specialty has had a fairly stable history. With the exception of changes in the numeric designation of the career ladder, the In-Flight Refueling specialty has remained fairly stable. Currently, the career ladder is undergoing a downsizing, forcing some changes in mission objectives that will be explained in later paragraphs.

Personnel assigned to the In-Flight Refueling Operator career ladder are assigned primarily to Air Mobility Command (AMC), and most are qualified in the KC-135R aircraft. The in-flight refueling operator's primary job is assisting the pilot in conducting air refueling. Consequently, the in-flight refueling operator, commonly referred to as the "boom operator," visually or verbally directs the receiver aircraft into the refueling envelope and then uses the boom or the drogue to conduct refueling. Additionally, the boom operator serves as loadmaster when the aircraft is carrying cargo or passengers.

In-Flight refueling operators check forms for equipment status; perform visual and operational checks of air refueling systems and equipment; and perform preflight, thru flight, and postflight inspections. In-flight refuelers also monitor the control panel for proper operation of equipment and perform emergency operations. In-flight refueling operators ascertain fuel, personnel, cargo, and emergency and special equipment weight and distribution for computing aircraft weight and balance. They ensure the aircraft is properly loaded within safe operating limits, and they complete weight and balance forms for the flight, using the load adjuster and loading graphs. Further responsibilities include jumpmaster duties and instruction of passengers in the use of emergency equipment and emergency procedures.

Prospective AFSC 1A0X1 personnel progress through two courses which include three phases of initial skills training. The first phase is the 20-day Enlisted Aviation Undergraduate Course (EAUC). This course covers general aircrew duties. The purpose of the course is early

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evaluation of individual abilities to handle the required flying. After EAUC, personnel enter water and land survival courses taught at Fairchild AFB WA. Upon completion of survival training, airmen proceed to the 398th Operations Support Squadron, Combat Crew Training School (CCTS) at Castle AFB CA. Since Castle AFB is closing October 1995, all CCTS training is being moved to Altus AFB OK (move completion date is March 1995). At CCTS, there are two phases: academic and flightline. Academic training, including simulators, lasts 32 training days. After academic training, personnel go on to the flightline training phase for 40 training days. This is the students' first opportunity to train in actual aircraft. Due to the current overmanning in the career field (approximately 103 percent overmanned), only 65 students are projected to graduate from CCTS in FY94. The majority of these students will be National Guard and Reserve personnel, who will return to their respective Guard or Reserve unit upon completion of the training program. The remainder of the students will come from Basic Military Training School (BMTS) (approximately 20 airman). From CCTS, the incumbent AFSC 1A0X1 personnel go to their respective assignments, where their training is continued by the Boom Operator-Instructors in formal Enlisted Specialty Training (EST).

## **SURVEY METHODOLOGY**

### **Inventory Development**

The data collection instrument for this occupational survey was Air Force Job Inventory (JI) AFPT 90-112-980, dated May 1992. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 30 subject-matter experts (SMEs) at the following operational bases:

#### **BASE**

Castle AFB CA

Dyess AFB TX

Barksdale AFB LA

#### **REASON FOR VISIT**

KC-135 Resident School

Representative operational base

KC-10 resident school and operational base

The resulting JI contained a comprehensive listing of 240 tasks grouped under 8 duty headings and a background section requesting such information as grade, duty title, aircraft qualifications currently held, and average number of days per month spent TDY.

### Survey Administration

From 1 September 1992 to 4 March 1993, Military Personnel Flights (MPF) at operational bases worldwide administered the inventory to 705 eligible AFSC 1A0X1 personnel. Members eligible for the survey included all assigned AFSC 1A0X1 personnel except these: One in hospital status, two transitioning in PCS status, three projecting retirement within 6 months, or four in their current positions for less than 6 weeks. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes obtained from the Air Force Military Personnel Center, Randolph Air Force Base TX.

Each respondent first completed an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each respondent then rated each of these tasks on a 9-point scale, showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of their time on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

### Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across military paygrade groups and major commands. Ninety-seven percent of eligible AFSC 1A0X1 personnel were mailed survey booklets. Seven hundred and five booklets were returned, and 549 survey booklets were acceptable. The 549 respondents in the final sample represent 46 percent of the total assigned personnel and account for 56 percent of the eligible personnel surveyed. Table 1 reflects the MAJCOM distribution for these AFSC 1A0X1 personnel. Table 2 displays the paygrade distribution of the sample. As reflected in these tables, the survey sample is closely representative of the career ladder population.

### Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 1A0X1 personnel (generally E-6 or E-7 technicians) also completed a training emphasis (TE) or task difficulty (TD) booklet. These booklets were processed separately from the JIs, and TE and TD data, where applicable, were considered when analyzing other issues in the study.

**TABLE 1**  
**MAJCOM REPRESENTATION IN SAMPLE**

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
USAFE	2	2
PACAF	3	4
ACC	22	22
AMC	72	71
Other	1	1

Total Assigned = 1,185  
 Total Surveyed = 980  
 Total in Sample = 549  
 Percent of Assigned in Sample = 46%  
 Percent of Surveyed in Sample = 83%

**TABLE 2**  
**PAYGRADE DISTRIBUTION OF SAMPLE**

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-3	11	14
E-4	27	24
E-5	22	23
E-6	17	16

### Training Emphasis (TE)

TE is defined as the amount of structured training first-enlistment personnel need to perform tasks successfully. Structured training provided by resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Forty-two experienced AFSC 1A071 NCOs rated the tasks in the inventory using a 10-point scale ranging from 0 (no training required) to 9 (extremely high TE). Interrater agreement for these 42 raters was acceptable. The average TE rating is 3.50, with a standard deviation of 2.52. Any task with a TE rating of 5.76 or greater is considered to have a high TE.

### Task Difficulty (TD)

TD is defined as an estimate of the length of time the average airman takes to learn how to perform a task. Thirty-four experienced NCOs rated the difficulty of the tasks on a 9-point scale ranging from 1 (easy to learn) to 9 (very difficult to learn). Interrater agreement was again acceptable. TD ratings are normally adjusted so tasks of average difficulty have a value of 5.0, with a standard deviation of 1.0. Thus, any task with a TD rating of 6.0 or above is considered difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting entry-level jobs.

### **SPECIALTY JOBS** (Career Ladder Structure)

An Air Force Occupational Analysis begins with an examination of the career ladder structure. The structure of jobs within the In-Flight Refueling career ladder was examined on the basis of similarity of tasks performed, and the percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

For the purpose of identifying the job structure, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description (all the tasks performed by that individual and the relative amount of time spent on those tasks) is compared to every other job description in the sample. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups, or new groups are formed based on the similarity of tasks performed and similar time ratings in the individual job descriptions.

The basic identifying group used in the hierarchical job structuring process is the Job. When there is a substantial degree of similarity between Jobs, they are grouped together and identified as a Cluster. When there are variations in the combinations of tasks and time by sample respondents, some number of different jobs are identified. The resulting job structure information (these varying jobs within the career ladder) can be used to evaluate the accuracy of career ladder documents (AFMAN 36-2108 Specialty Descriptions, the Career Field Education and Training Plan (CFETP), and the Specialty Training Standard (STS)), and to gain a better understanding of current utilization patterns. The above terminology will be used in the discussion of the AFSC 1AOX1 career ladder structure.

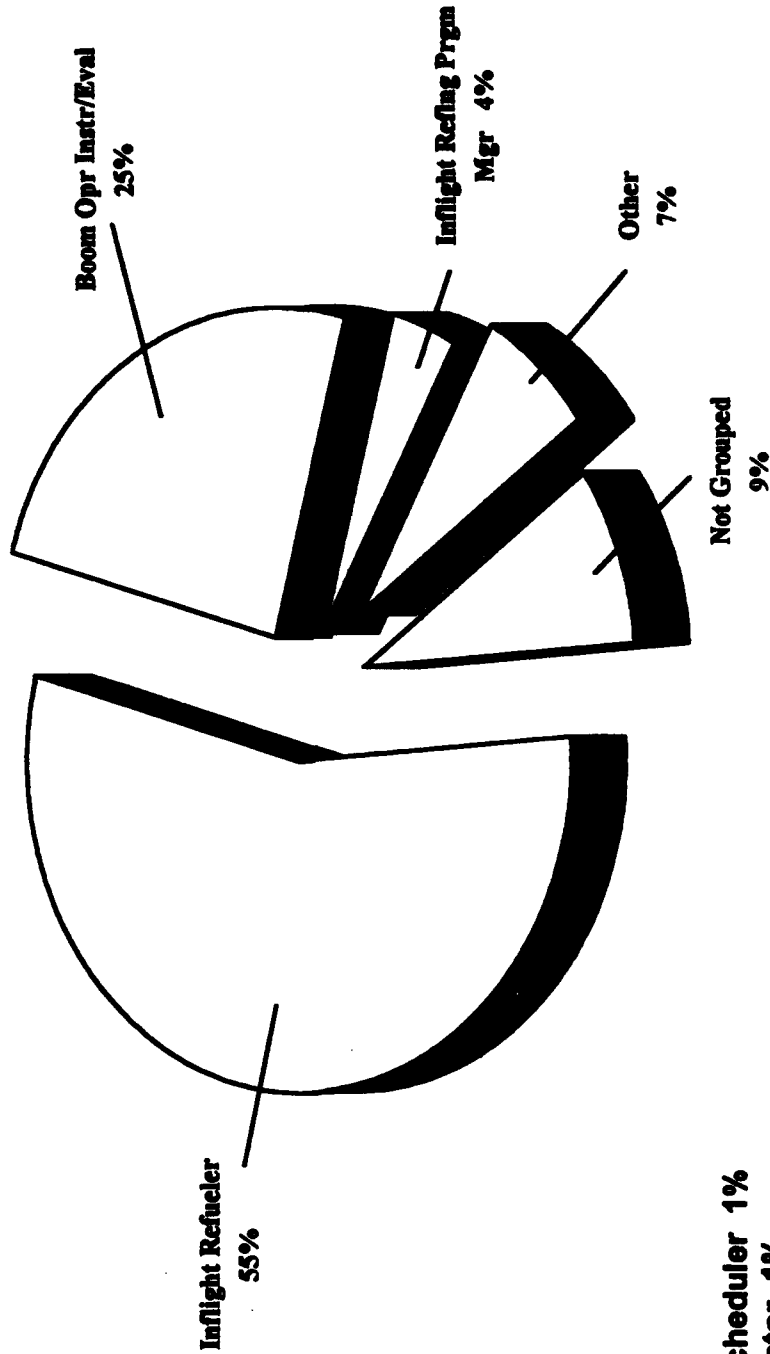
### Overview of Specialty Jobs

Structure analysis identified one cluster and eight jobs within the survey sample. Based on task similarity and relative time spent, the division of jobs performed by AFSC 1AOX1 personnel is illustrated in Figure 1, and a listing of those jobs is provided below. The high degree of homogeneity within this ladder is clearly shown by this figure. The stage (ST) number shown beside each title is a reference to computer-printed information; the number of personnel in each stage (N) is also shown.

- I. IN-FLIGHT REFUELER JOB (ST0063, N=303)
- II. BOOM OPERATOR-INSTRUCTOR/EVALUATOR CLUSTER (ST0061, N=135)
  1. Boom Operator-Instructor Job
  2. Unit Evaluator Job
- III. FLIGHT MISSION SCHEDULER JOB (ST0069, N=7)
- IV. COMMAND EVALUATOR JOB (ST0077, N=8)
- V. COMBAT CREW TRAINING SCHOOL FLIGHT INSTRUCTOR JOB (ST0075, N=9)
- VI. GROUND SCHEDULING JOB (ST0054, N=5)
- VII. FLIGHT CHIEF JOB (ST0047, N=6)
- VIII. IN-FLIGHT REFUELING PROGRAM MANAGER JOB (ST0030, N=21)
- IX. SENIOR PROGRAM MANAGER JOB (ST0020, N=6)



# **AFSC 1A0X1 (FORMERLY AFSC 112X0) CAREER LADDER JOBS**



**Other Includes:**  
 Flight Mission Scheduler 1%  
 Command Evaluator 1%  
 CCTS Flight Instructor 2%  
 Ground Scheduling 1%  
 Flight Chiefs 1%  
 Senior Program Manager 1%

**FIGURE 1**

The above jobs account for 91 percent of the sample. The remaining 9 percent did not group with any independent job due to either the unique job they performed or the manner in which they perceived their jobs. Some of the unique titles of respondents who did not group were Chief AFMC Boom Operator, KC-10 Planner, and AFFTC Enlisted Aircrew Manager.

### Group Descriptions

The following paragraphs contain brief descriptions of the jobs identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of these specialty jobs. Selected background data for these jobs are provided in Table 4. Representative tasks for all the stages and groups are contained in Appendix A.

I. IN-FLIGHT REFUELER JOB (ST0063). Three hundred and three airmen perform this job (55 percent of the sample). Their job consists of operating the refueling boom during air to air refueling and performing common aircrew and loadmaster duties. This is the core work of the ladder. Members refuel aircraft, secure cargo, load crew gear on aircraft, and monitor engine instruments. Most of the job time of In-Flight Refuelers (35 percent) is spent performing common aircrew tasks. Typical tasks which members perform include:

- direct receiver aircraft into refueling position using pilot
- director lights
- refuel receiver aircraft with boom refueling normal systems
- perform EMCON option-1 and 2 air refueling
- direct passengers loading and unloading
- open or close crew entrance doors
- monitor radio communications

Personnel perform an average of 105 tasks. Eighty percent of the In-Flight Refuelers hold a 5-skill level or less, and 36 percent are in their first enlistment. By far the most common aircraft that members are currently qualified in is the KC-135R.

II. BOOM OPERATOR-INSTRUCTOR/EVALUATOR CLUSTER (ST0061). There are 135 personnel in this cluster representing 23 percent of the ladder. The career Boom Operator-Instructor/Evaluator cluster includes the responsibilities of training members in refueling, aircrew, and loadmaster tasks. They also evaluate instructors, standardization programs, and inspection reports. Boom Operator-Instructors/Evaluators spend 11 percent of their time on training-related tasks. Typical training-oriented tasks performed by the boom operator-instructor job are:

TABLE 3

## AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS\*\*

DUTIES	SENIOR PROGRAM MANAGER (STG 20)		IN-FLIGHT REFUELING PROGRAM MANAGER (STG 30)		FLIGHT CHIEF (STG 47)		GROUND SCHEDULING (STG 54)	
A ORGANIZING AND PLANNING	16		10		7		7	
B DIRECTING AND IMPLEMENTING	17		12		9		4	
C INSPECTING AND EVALUATING	9		7		3		1	
D TRAINING	9		19		7		7	
E PERFORMING COMMON AIRCREW TASKS	17		19		25		34	
F PERFORMING PREFLIGHT AND POSTFLIGHT FUNCTIONS	7		5		6		11	
G PERFORMING IN-FLIGHT AIR REFUELING AND CRUISING FUNCTIONS	16		17		21		29	
H PERFORMING LOADMASTER FUNCTIONS	9		10		22		6	

\* Denotes less than 1 percent

\*\* Columns may not add up to 100 percent due to rounding

TABLE 3 (CONTINUED)

## AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS\*\*

DUTIES	BOOM OPERATOR- INSTRUCTOR/ EVALUATOR (STG 61)	IN-FLIGHT REFUELER (STG 63)	FLIGHT MISSION SCHEDULER (STG 69)	CCTS FLIGHT INSTRUCTOR (STG 75)	COMMAND EVALUATOR (STG 77)
A ORGANIZING AND PLANNING	5	1	9	2	3
B DIRECTING AND IMPLEMENTING	6	1	10	4	4
C INSPECTING AND EVALUATING	3	*	3	1	8
D TRAINING	11	2	5	16	6
E PERFORMING COMMON AIRCREW TASKS	27	35	30	30	30
F PERFORMING PREFLIGHT AND POSTFLIGHT FUNCTIONS	10	12	10	11	8
G PERFORMING IN-FLIGHT AIR REFUELING AND CRUISING FUNCTIONS	23	31	26	27	28
H PERFORMING LOADMASTER FUNCTIONS	16	18	8	8	12

\* Denotes less than 1 percent

\*\* Columns may not add up to 100 percent due to rounding

TABLE 4

## SELECTED BACKGROUND DATA FOR AFSC 1A0X1 CAREER LADDER JOBS

DUTIES	SENIOR PROGRAM MANAGER (STG 20)	IN-FLIGHT REFUELING PROGRAM MANAGER (STG 30)	FLIGHT CHIEF (STG 47)	GROUND SCHEDULING (STG 54)
NUMBER IN GROUP	6	21	6	5
PERCENT OF SAMPLE	1%	4%	1%	1%
<u>DAFSC DISTRIBUTION:</u>				
1A031	0%	0%	0%	0%
1A051	0%	10%	17%	20%
1A071	17%	62%	50%	80%
1A091	50%	19%	33%	0%
1A000	33%	10%	0%	0%
<u>PAYGRADE DISTRIBUTION:</u>				
E-1-E-3	0%	0%	0%	0%
E-4	0%	10%	0%	40%
E-5	0%	19%	0%	20%
E-6	0%	10%	33%	20%
E-7	17%	43%	50%	0%
AVERAGE NUMBER OF TASKS PERFORMED	134	155	116	96
AVERAGE MONTHS TAFMS	241	195	216	159
PERCENT IN FIRST ENLISTMENT	0%	0%	0%	0%
PERCENT SUPERVISING	34%	64%	51%	20%

TABLE 4 (CONTINUED)

## SELECTED BACKGROUND DATA FOR 1A0X1 CAREER LADDER JOBS

DUTIES	BOOM OPERATOR- INSTRUCTOR/ EVALUATOR (STG 61)	IN-FLIGHT REFUELER (STG 63)	FLIGHT MISSION SCHEDULER (STG 69)	CCTS FLIGHT INSTRUCTOR (STG 75)	COMMAND EVALUATOR (STG 77)
NUMBER IN GROUP	135	303	7	9	8
PERCENT OF SAMPLE	25%	55%	1%	2%	1%
<u>DAFSC DISTRIBUTION:</u>					
1A031	3%	14%	0%	0%	0%
1A051	20%	60%	0%	22%	13%
1A071	63%	26%	71%	78%	75%
1A091	13%	1%	14%	0%	0%
1A000	4%	0%	14%	0%	13%
<u>PAYGRADE DISTRIBUTION:</u>					
E-1-E-3	0%	25%	0%	0%	0%
E-4	16%	30%	0%	13%	13%
E-5	23%	26%	0%	33%	13%
E-6	19%	14%	29%	33%	13%
E-7	33%	5%	43%	11%	50%
AVERAGE NUMBER OF TASKS PERFORMED	143	105	119	108	115
AVERAGE MONTHS TAFMS	169	91	198	131	187
PERCENT IN FIRST ENLISTMENT	1%	39%	0%	0%	0%
PERCENT SUPERVISING	36%	4%	60%	33%	13%

- evaluate new systems developments, such as boom, drogue,  
or receiver equipment**
- evaluate trainees, other than resident course students**
- determine resident course training requirements**
- conduct receiver category training**
- administer proficiency checks**
- write training reports**

The average Boom Operator-Instructor/Evaluator TAFMS is 168.5 months. Thirty-three percent of the personnel in this cluster have the 7-skill level. The Boom Operator-Instructors/Evaluators are assigned to either the KC-10 or the KC-135 airframe. Although the two in-flight refueling systems are entirely different, the tasks performed in the cluster are very similar.

Two jobs were identified within this cluster. The first job is the Boom-Operator-Instructor job. Like the In-Flight Refueler job, members in the Boom Operator-Instructor job perform aircrew, refueling, and loadmaster duties. When trainees are not flying a given mission, the Boom Operator-Instructors perform the same tasks found in the In-Flight Refueler job. However, when trainees are flying a mission, the role of the Boom Operator-Instructor job changes. The emphasis becomes more focused on training than on in-flight refueling.

In the KC-135, this job occurs at the wing and unit level. At the wing level, the job involves administration of initial in-flight refueling academics and training. This training immediately follows BMTS and is conducted at CCTS (Castle AFB CA). At the unit level, the job entails providing supplemental in-flight refueler training. An example of this is when In-Flight Refuelers are trained by Boom Operator-Instructors to refuel different types of fighter aircraft.

In the KC-10, all of the training occurs at the unit level. All KC-10 In-Flight Refuelers are required to be KC-135 In-Flight Refuelers first; the initial training has already occurred at CCTS. All academics and flightline time are completed at the unit assigned.

The second job in this cluster, Unit Evaluator, involves evaluating trainee performance and various programs and methods used across the career ladder. The primary focus of this job, unlike all of the other jobs in this career ladder, is not performing common aircrew functions. The duty to which they devote the greatest average amount of time is training, then followed by common aircrew tasks. The Unit Evaluator job consists of troubleshooting aircraft malfunctions, evaluating compliance with performance standards, and directing or implementing local training programs.

**III. FLIGHT MISSION SCHEDULER JOB (ST0069).** There are seven incumbents in this staff job, representing about 1 percent of the career ladder. The job consists of scheduling in-flight refueling missions and performing common aircrew and in-flight refueling tasks. The duties that distinguish the Flight Mission Scheduler are administrative in nature; the Scheduler job involves planning flight schedules, writing correspondence, and conducting staff meetings. The job is not involved with typical training tasks, such as conducting proficiency training or writing training reports. Also, the major purpose of the flight time spent in this job is to retain currency, which takes about 12 sorties per semester (about 50 hours of flight time). Typical Flight Mission Scheduler tasks include:

- coordinate operational work activities with other sections
- compile information for reports or staff studies
- conduct staff meetings
- plan flight schedules
- write correspondence
- plan briefings

Supervision of subordinates is more prevalent with the Flight Mission Scheduler job; 43 percent of incumbents report that they supervise five subordinates or less. Seventy-two percent of the incumbents are in paygrades E-6 and E-7. Seventy-one percent of the incumbents have a time in service of 16 years or greater.

**IV. COMMAND EVALUATOR JOB (ST0077).** The eight members in this job represent about 2 percent of the career ladder. The Command Evaluator job is responsible for standardization/evaluation duties and aircrew/refueling duties. The Command Evaluator job is a higher headquarters function, charged with evaluating Unit Evaluators and with reviewing entire unit standardization/evaluation programs. Roughly, two-thirds of the refueling missions that include the Command Evaluator job are missions where the Evaluator performs as an In-Flight Refueler. When an incumbent is being evaluated on a mission, the Command Evaluator observes and records information on the crew member's proficiency in checklist procedures, mission planning, etc. When evaluating a unit standardization/evaluation program, the Command Evaluator reviews training reports, stan/eval folders, and unit-level evaluators in actual in-flight refueling missions. Typical Command Evaluator tasks include:

- establish organizational policies, office instructions (OIs),  
or standard operating procedures (SOPs)
- evaluate standardization programs
- plan standardization programs
- administer proficiency checks
- administer recurrency checks
- evaluate instructors



Personnel in the Command Evaluator job spend 8 percent of their time performing, inspecting, and evaluating duties. Personnel become Evaluators by first being upgraded to Boom Operator-Instructor. They are then appointed to the Command Evaluator job by their supervisors. Incumbents perform an average of 115 tasks. Incumbents were evenly split between ACC and AMC, and seven out of eight Evaluators supervise no one.

V. COMBAT CREW TRAINING SCHOOL (CCTS) FLIGHT INSTRUCTOR JOB (ST0075). There are nine incumbents in this job representing about 2 percent of the specialty. The job involves training AFSC 1A0X1 personnel in the basic in-flight refueling academics and flightline procedures for the KC-135. The job includes teaching systems classes, training personnel in the air, and supervising incumbents. In the air, the CCTS Flight Instructor job is carried out in an on-the-job training format, allowing for more student-Flight Instructor interaction. The only major differences between this and the In-Flight Refueler job are the in-flight training and the supervision responsibilities. Typical tasks in this job include:

- perform ground training, such as cargo loading or life support systems and equipment
- conduct resident course flight instruction
- counsel trainees on training progress
- maintain training records
- plan resident training
- administer tests

Again, incumbents spend most of their time on common aircrew and in-flight refueling tasks. Sixteen percent of their time is spent on training, administering tests, conducting resident in-flight refueling training, and planning resident training. Incumbents perform an average of 108 tasks. The predominant paygrades are E-5 and E-6, and the average time in service is 131 months.

VI. GROUND SCHEDULING JOB (ST0054). There are five members in the Ground Scheduling job, representing about 1 percent of the career ladder. Incumbents plan briefings, develop work methods or procedures, and determine work priorities in the aircrew ground training environment. Aircrew ground training consists of systems classes, bailout training, and miscellaneous training. While the job still includes flying, members have responsibility for many more administrative and planning duties than the average In-Flight Refueler. Members of this job primarily fly to maintain currency. Representative tasks include:

- coordinate operational work activities with other sections
- supervise In-Flight Refueling Operators (AFSC 1A051)
- refuel receiver aircraft with drogue
- develop work methods or procedures
- conduct receiver category training
- write correspondence

Ground Schedulers spend about 7 percent of their time involved in organizing and planning duties. Personnel perform an average of 96 tasks. Sixty percent of the incumbents have 4 to 8 years' time in service, and all five Ground Schedulers are assigned to AMC.

**VII. FLIGHT CHIEF JOB (ST0047).** There are six incumbents in this job, representing about 1 percent of the career ladder. The Flight Chief job is responsible for common aircrew, refueling, and loadmaster duties during KC-10 in-flight refueling missions. The Flight Chief job is very similar to the In-Flight Refueling job, with an emphasis on loadmaster duties while accomplishing the mission. There is also a significant supervisory role in this job. The Flight Chief job is filled by the senior enlisted member in the flight, and is responsible for overseeing training for the flight members and for writing their EPRs. While the In-Flight Refuelers assigned to the KC-135 series work for the aircraft commander (the AC commander writes the EPRs), the In-Flight Refuelers assigned to the KC-10 series work for the Flight Chief. It is also desirable (but not required) for the Flight Chief to be instructor qualified. This increases the overall effectiveness of the supervisory aspect of the job. Representative tasks include:

- supervise In-Flight Refueling Operators/Technicians (AFSC 1A071)
- marshal vehicles inside aircraft
- inspect cargo for air transport
- position loaders or elevators
- determine work priorities
- brief load team personnel

Sixty-seven percent of the incumbents are in ACC, with the remainder split evenly between PACAF and AMC. Flight Chiefs supervise from 5 to 7 subordinates and perform an average of 116 tasks. All of the Flight Chiefs have at least 12 years time in service.

**VIII. IN-FLIGHT REFUELING PROGRAM MANAGER JOB (ST0030).** Four percent of the sample (21 members) hold this job. All aircraft modifications are reviewed by personnel with the In-Flight Refueling Program Manager job. They act as SMEs to provide expertise to the aircraft engineers and contractors on how operational requirements interface with

operational limitations. The duties of the job are administrative in nature, as Program Managers draft budgets, implement quality control programs, and write staff studies and surveys. Tasks common to this job are:

- establish organizational policies, office instructions (OIs),  
or standard operating procedures (SOPs)
- interpret policies, directives, or procedures for subordinates
- participate in general or specialized mission briefings
- perform load planning for cargo or passenger missions
- write correspondence

Over 80 percent of the incumbents are in paygrade E-8 or higher. Two-thirds are located in AMC, and the remainder are assigned to ACC. Members in the In-Flight Refueling Program Manager job fly to remain current and to participate in test missions.

**IX. SENIOR PROGRAM MANAGER JOB (ST0020)** There are six incumbents in this job, representing about 1 percent of the sample. The job consists of writing staff studies and general management-oriented tasks. Also, Senior Program Managers implement quality control programs and evaluate new system developments. The tasks performed in this job are very similar to the tasks performed by the In-Flight Refueling Program Manager job. Supervision of subordinates is not normally part of this job. The Senior Program Manager performs common aircrew and In-Flight refueling tasks to maintain proficiency. Typical tasks include:

- establish organizational policies, office instructions (OIs),  
or standard operating procedures (SOPs)
- interpret policies, directives, or procedures for subordinates
- develop cost reduction programs
- direct utilization of personnel
- determine work priorities
- write correspondence

The average TAFMS of the incumbents in this job is 241 months. Two-thirds of the Senior Program Managers are assigned to AMC, with one-third of the personnel assigned to ACC.

### Comparison of Current Job Descriptions to Previous Survey Findings

The results of the specialty job analysis were compared to those of OSR AFPT 90-112-454, In-Flight Refueling career ladder, dated March 1983. After reviewing the tasks comprising the jobs identified in 1983, most of the jobs could be matched to similar jobs in the previous study, as shown in Table 5. There is one job from the previous study that did not match any jobs on the current study. This is the Alert Force Manager. The Alert Force Manager may not have broken into a distinct job group because of the current deemphasizing of alert. There are also two current jobs not in the previous study. They are the Ground Scheduling job and the Flight Chief job. Both have become more distinct probably due to changing mission requirements.

### **ANALYSIS OF DAFSC GROUPS**

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as AFM 36-2108 Specialty Descriptions, the CFETP, and the STS, reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across the skill-level groups. Both the In-Flight Refueler job and the Ground Scheduling job is best represented by AFSC 1A051, as 54 percent of the In-Flight Refuelers and 60 percent of Ground Schedulers are AFSC 1A051. The Boom Operator-Instructor/Evaluator job, Flight Mission Scheduler job, Command Evaluator job, CCTS Flight Instructor job, Flight Chief job, and the In-Flight Refueling Program Manager job are all well represented in AFSC 1A071. The Senior Program Manager job is most prevalent amongst AFSC 1A091, with 50 percent of the incumbents having the 9-skill level.

A typical pattern of progression is present, with personnel spending slightly more of their relative time on duties involving supervisory, managerial, and training tasks as they move upward toward the 7-skill level. An example of this can be found in the average tasks performed by each job. The highest concentration of 3- and 5- skill level incumbents is found in the In-Flight Refueler and the Ground Scheduler jobs. These two jobs also have the lowest average number of tasks performed of all the jobs. On the whole, this helps show that the average number of tasks increases in the jobs as the skill level increases. It is also obvious, though, that all personnel (even senior enlisted leadership) are still involved with technical task performance, as will be pointed out in the specific skill-level group discussions below.

TABLE 5

## SPECIALTY JOB COMPARISONS BETWEEN CURRENT AND 1983 SURVEYS

CURRENT SURVEY (N=549)	PERCENT OF SAMPLE	1A0X1/112X0 1983 SURVEY (N=765)	PERCENT OF SAMPLE
IN-FLIGHT REFUELER	55	LINE BOOM OPERATOR	42
BOOM OPERATOR/INSTRUCTOR-EVALUATOR CLUSTER	25	INSTRUCTOR BOOM OPERATOR	22
		STANDARDIZATION/EVALUATION INSTRUCTOR BOOM OPERATOR	10
FLIGHT MISSION SCHEDULER	1	TANKER SCHEDULING MANAGER	1
COMMAND EVALUATOR	1	COMBAT EVALUATION GROUP FLIGHT EXAMINER BOOM OPERATOR	1
CCTS FLIGHT INSTRUCTOR	2	CCTS FLIGHT INSTRUCTOR BOOM OPERATOR	5
		CCTS ACADEMIC INSTRUCTOR BOOM OPERATOR	1
		BOOM OPERATOR PART TASK TRAINER	1
		CENTRAL FLIGHT INSTRUCTOR COURSE INSTRUCTOR	1
GROUND SCHEDULING	1	--	
FLIGHT CHIEF	1	--	
IN-FLIGHT REFUELING PROGRAM MANAGER	4	UNIT IN-FLIGHT REFUELING PROGRAM MANAGER	5
SENIOR PROGRAM MANAGER	1	ALERT FORCE MANAGER	3
--		NO JOB TITLE, OR JOB TITLE NOT LISTED	6
--			
--			

-- Indicates no match in report

TABLE 6

DISTRIBUTION OF SKILL-LEVEL MEMBERS ACROSS CAREER LADDER JOBS  
(PERCENT)

JOB	AFSC				
	1A031 (N=43)	1A051 (N=232)	1A071 (N=277)	1A091 (N=32)	1A000 (N=15)
IN-FLIGHT REFUELER	95	78	34	6	6
BOOM OPERATOR-INSTRUCTOR/EVALUATOR	0	11	37	56	33
FLIGHT MISSION SCHEDULER	0	0	2	3	6
COMMAND EVALUATOR	0	*	2	0	6
CCTS FLIGHT INSTRUCTOR	0	1	3	0	0
GROUND SCHEDULER	0	*	1	0	0
FLIGHT CHIEF	0	*	1	6	0
IN-FLIGHT REFUELING PROGRAM MANAGER	0	1	5	12	13
SENIOR PROGRAM MANAGER	0	0	0	6	20

\* Denotes less than 1 percent

TABLE 7

**TIME SPENT ON DUTIES BY MEMBERS OF SKILL-LEVEL GROUPS  
(RELATIVE PERCENT OF JOB TIME)\*\***

DUTIES	AFSC			
	1A031 (N=43)	1A051 (N=232)	1A071 (N=277)	1A091 (N=32)
A ORGANIZING AND PLANNING	*	3	9	9
B DIRECTING AND IMPLEMENTING	*	1	5	8
C INSPECTING AND EVALUATING	*	*	2	5
D TRAINING	*	1	4	8
E PERFORMING COMMON AIRCREW TASKS	38	34	29	25
F PERFORMING PREFLIGHT AND POSTFLIGHT FUNCTIONS	13	12	10	9
G PERFORMING IN-FLIGHT AIR REFUELING AND CRUISING FUNCTIONS	33	31	25	23
H PERFORMING LOADMASTER FUNCTIONS	15	17	16	13

\* Denotes less than 1 percent

\*\* Columns may not add up to 100 percent due to rounding

### Skill-Level Descriptions

**DAFSC 1A031.** The 30 airmen reporting holding the 3-skill level (representing 5 percent of the survey sample) performed an average of 98 tasks. Since most of the 3-skill level personnel are in the In-Flight Refueler job, most of their duty time is spent performing common aircrew, in-flight air refueling, and cruising tasks (see Table 6 for all jobs performed by the different DAFSCs). Tasks involving loadmaster duties accounted for an additional 15 percent of their duty time, while performing preflight and postflight duties took another 13 percent of their time. Table 8 displays representative tasks performed by the highest percentages of these airmen. The bulk of these tasks deal with refueling aircraft, monitoring the engine instruments, and securing cargo.

**DAFSC 1A051.** Five-skill level personnel (42 percent of the survey sample) perform many tasks in common with the 3-skill level personnel. The scope of the job performed by these airmen is slightly greater than that of the 3-skill level group (106 tasks versus an average of only 98 tasks, respectively), and 5-skill level members are represented in all but 3 of the 9 specialty jobs (see Table 6). The 5-skill levels are predominantly In-Flight Refuelers and Boom Operator-Instructor/Evaluators. Members spend 30 percent of their time on aircrew tasks, 30 percent on in-flight refueling duties, and roughly half that time on both loadmaster and preflight/postflight functions. Managerial duties are a small part of the job for 5-skill level members (6 percent). As shown in Table 9, the majority of the tasks performed by journeymen deal with in-flight tasks. Table 10 displays those tasks which reflect differences between the apprentice and journeyman groups. The 5-skill levels perform all the tasks performed by the 3-levels, plus more training and slightly more supervisory-oriented tasks (see Table 10).

**DAFSC 1A071.** Representing 41 percent of the survey sample, these 227 NCOs perform an average of 120 tasks. Members spend 80 percent of their time performing the core in-flight refueler functions (common aircrew tasks, in-flight refueling, loadmaster duties, and preflight/postflight functions). Table 11 displays representative tasks performed by AFSC 1A071 personnel. In comparison to the 3- and 5-skill level respondents, more of the craftsman's time is spent on supervisory, training, and managerial duties (see Table 12).

**DAFSC 1A091/1A000.** The 47 NCOs in the 9-skill and CEM-levels perform an average of 137 tasks. While the 9-skill level personnel and CEMs still spend a majority of their time performing common aircrew and in-flight refueling tasks, their main task emphasis outside of flight duties is managerial in nature. They perform training, directing, and organizing tasks (see Tables 13 and 14). These incumbents are the directors and managers of the In-Flight Refueling Operator career field, directing training programs, supervising and evaluating incumbents, and managing workload requirements. The highest concentration of E-8s and E-9s is found in the Boom Operator-Instructor/Evaluator. CEM tasks are displayed in Table 15, and tasks that best differentiate between 1A091 and 1A000 are displayed in Table 16.



TABLE 8

## REPRESENTATIVE TASKS PERFORMED BY AFSC 1A031 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=43)
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	100
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	100
E125 LOAD CREW GEAR ON AIRCRAFT	100
G198 PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING	100
E127 MONITOR RADIO COMMUNICATIONS	100
G185 INFORM PILOTS OF REFUELING OPERATION STATUS	100
G195 PERFORM EMCON OPTION-2 AIR REFUELING	100
E128 OPEN OR CLOSE CREW ENTRANCE DOORS	100
E138 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	100
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND EMERGENCY PROCEDURES	100
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	98
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	98
E153 STUDY TOS FOR ABNORMAL, EMERGENCY GROUND, OR IN-FLIGHT PROCEDURES	98
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	98
E134 ORDER AIRCREW FLIGHT LUNCHES	98
F173 PERFORM SEXTANT PREFLIGHT CHECKS	98
G194 PERFORM EMISSION CONTROL (EMCON) OPTION-1 AIR REFUELING	98
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	98
E130 OPERATE EMERGENCY ESCAPE HATCHES	98
G189 MONITOR FUEL PANELS	95
G188 MONITOR FLIGHT INSTRUMENTS	95
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	95
F175 POSITION PROFESSIONAL EQUIPMENT AT BOOM OPERATORS	95
G187 MONITOR ENGINE INSTRUMENTS	95
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	95
E156 TURN IN LIFE SUPPORT EQUIPMENT	95
E141 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	93
G216 VERBALLY DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION	93
E151 SECURE EQUIPMENT FOR FLIGHT OPERATIONS	91
F159 BRIEF FLIGHT CREWS CONCERNING AIR REFUELING MISSION ACTIVITIES	91

**TABLE 9**  
**REPRESENTATIVE TASKS PERFORMED BY AFSC 1A051 PERSONNEL**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING (N=232)</b>
E128 OPEN OR CLOSE CREW ENTRANCE DOORS	99
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	98
E127 MONITOR RADIO COMMUNICATIONS	98
F172 PERFORM PASSENGER BRIEFINGS	98
H238 SECURE CARGO	98
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	97
H223 DIRECT PASSENGERS LOADING OR UNLOADING	97
G212 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING TANKER MANUAL OPERATIONS	97
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	97
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	97
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	97
G187 MONITOR ENGINE INSTRUMENTS	96
G195 PERFORM EMCON OPTION-2 AIR REFUELING	96
H219 COMPUTE CARGO RESTRAINT REQUIREMENTS	96
E136 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	96
H240 SUPERVISE PASSENGERS ON MISSIONS	96
H232 POSITION CARGO IN AIRCRAFT	96
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	96
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	96
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	96
G199 PERFORM OPERATIONAL CHECKS ON BOOM AIR REFUELING SYSTEMS	96
G185 INFORM PILOTS OF REFUELING OPERATION STATUS	95
G188 MONITOR FLIGHT INSTRUMENTS	95
E125 LOAD CREW GEAR ON AIRCRAFT	95
E151 SECURE EQUIPMENT FOR FLIGHT OPERATIONS	94
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND GROUND EMERGENCY PROCEDURES	94
G189 MONITOR FUEL PANELS	94
G198 PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING	92
F170 PERFORM NORMAL GROUND CHECKLIST PROCEDURES	91
G182 ACT AS IN-FLIGHT SAFETY OBSERVER	84

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN AFSC 1A031 AND AFSC 1A051 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	1A031 (N=43)	1A051 (N=232)	DIFFERENCE
E157 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	77	58	19
F162 FIT PERSONNEL FOR SPARE PARACHUTES	30	15	16
E156 TURN IN LIFE SUPPORT EQUIPMENT	95	81	14
E155 TURN IN GALLEY EQUIPMENT	93	80	13
F173 PERFORM SEXTANT PREFLIGHT CHECKS	98	86	12
D104 MAINTAIN TRAINING RECORDS	2	15	-13
D83 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	0	13	-13
H235 PREPARE AIRCRAFT FOR LOADING OR UNLOADING CARGO	81	94	-13
E152 SELECT MAINTENANCE BREVITY CODES	23	37	-14
E117 APPLY INTERNAL OR EXTERNAL POWER TO AIRCRAFT	74	88	-14
D85 CONDUCT TRAINING CONFERENCES OR BRIEFINGS	0	14	-14
H230 PERFORM SPECIAL HANDLING REQUIREMENTS	41	56	-14
D84 CONDUCT RESIDENT COURSE FLIGHT INSTRUCTION	0	14	-14
D113 WRITE TRAINING REPORTS	0	14	-14
D91 DEVELOP LESSON PLANS	0	14	-14
D105 PERFORM SPECIAL HANDLING REQUIREMENTS	23	38	-14
F179 REPLENISH OIL OR HYDRAULIC FLUIDS	40	54	-14
H227 OPERATE CARGO LOADING EQUIPMENT	47	61	-15
G200 PERFORM OPERATIONAL CHECKS ON DROGUE AIR REFUELING SYSTEMS	63	78	-15
G209 PREPARE FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL DROGUE AIR REFUELING	67	83	-16

TABLE 11

## REPRESENTATIVE TASKS PERFORMED BY AFSC 1A071 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=227)
E127 MONITOR RADIO COMMUNICATIONS	97
E128 OPEN OR CLOSE CREW ENTRANCE DOORS	97
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	97
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	96
G186 INTERPRET AND USE RADIO SILENT SIGNALS	96
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	96
E138 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	96
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	96
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	96
G188 MONITOR FLIGHT INSTRUMENTS	96
F172 PERFORM PASSENGER BRIEFINGS	96
H223 DIRECT PASSENGERS LOADING OR UNLOADING	96
F172 PERFORM PASSENGER BRIEFINGS	96
G187 MONITOR ENGINE INSTRUMENTS	95
G195 PERFORM EMCON OPTION-2 AIR REFUELING	95
G198 PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING	95
E136 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	95
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	95
G212 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING TANKER MANUAL OPERATIONS	94
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	94
H240 SUPERVISE PASSENGERS ON MISSIONS	94
E125 LOAD CREW GEAR ON AIRCRAFT	94
G189 MONITOR FUEL PANELS	94
H219 COMPUTE CARGO RESTRAINT REQUIREMENTS	93
H235 PREPARE AIRCRAFT FOR LOADING OR UNLOADING CARGO	93
E133 OPERATE GALLEY EQUIPMENT	93
G185 INFORM PILOTS OF REFUELING OPERATION STATUS	93
E151 SECURE EQUIPMENT FOR FLIGHT OPERATIONS	93
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	93
G182 ACT AS IN-FLIGHT SAFETY OBSERVER	93

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN  
AFSC 1A051 AND AFSC 1A071 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	1A051 (N=232)	1A071 (N=227)	DIFFERENCE
A3 COORDINATE OPERATIONAL WORK ACTIVITIES WITH OTHER SECTIONS	20	53	-33
A5 DETERMINE WORK PRIORITIES	19	43	-24
A8 DEVELOP WORK METHODS OR PROCEDURES	9	35	-26
A10 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OIs), OR STANDARD OPERATING PROCEDURES (SOPs)	5	27	-22
A11 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	7	37	-30
A13 PLAN BRIEFINGS	22	47	-25
A14 PLAN FLIGHT SCHEDULES	9	32	-23
A18 PLAN STANDARDIZATION PROGRAMS	2	23	-21
B23 COMPLETE INFORMATION FOR REPORTS OR STAFF STUDIES	7	32	-25
B29 DIRECT UTILIZATION OF PERSONNEL	5	26	-21
B38 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	12	41	-29
B42 SUPERVISE APPRENTICE IN-FLIGHT REFUELING OPERATORS (AFSC 1A031)	20	51	-31
B44 SUPERVISE IN-FLIGHT REFUELING OPERATORS (AFSC 1A051)	24	59	-35
B46 SUPERVISE IN-FLIGHT REFUELING OPERATORS/TECHNICIANS (AFSC 1A071)	10	47	-37
B49 WRITE CORRESPONDENCE	6	38	-32
C50 ADMINISTER PROFICIENCY CHECKS	6	28	-22
C51 ADMINISTER RECURRENCE CHECKS	4	26	-22
C55 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	8	31	-23
D76 ADMINISTER TESTS	16	48	-32
D77 ADVISE STAFF OR UNIT PERSONNEL ON TRAINING MATTERS	12	50	-38
D80 CONDUCT PROFICIENCY TRAINING	26	61	-35
D81 CONDUCT RECEIVER CATEGORY TRAINING	24	49	-25
D82 CONDUCT REMEDIAL TRAINING	21	51	-30
D87 COUNSEL TRAINEES ON TRAINING PROGRESS	16	45	-29
D88 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	23	56	-33

**TABLE 13**  
**REPRESENTATIVE TASKS PERFORMED BY AFSC 1A091 PERSONNEL**

TASKS	PERCENT MEMBERS PERFORMING (N=32)
E127 MONITOR RADIO COMMUNICATIONS	100
G194 PERFORM EMISSION CONTROL (EMCON) OPTION-1 AIR REFUELING	100
G210 PREPARE FOR CONTACT CHECKLIST PROCEDURES FOR TANKER MANUAL AIR REFUELING	100
G212 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING TANKER MANUAL OPERATIONS	100
E128 OPEN OR CLOSE CREW ENTRANCE DOORS	100
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	100
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	100
E138 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	100
G186 INTERPRET AND USE RADIO SILENT SIGNALS	100
G187 MONITOR ENGINE INSTRUMENTS	100
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	100
F170 PERFORM NORMAL GROUND CHECKLIST PROCEDURES	100
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	100
G216 VERBALLY DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION	100
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	100
G189 MONITOR FUEL PANELS	100
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	100
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	100
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND EMERGENCY PROCEDURES	97
E136 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	97
E120 DEMONSTRATE TO PASSENGERS THE PROPER USE OF LIFE SUPPORT EQUIPMENT	97
G190 OPERATE AIR-CONDITIONING CONTROLS	97
G195 PERFORM NORMAL GROUND CHECKLIST PROCEDURES	97
E136 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	97
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	97
G182 ACT AS IN-FLIGHT SAFETY OBSERVER	97
G199 PERFORM OPERATIONAL CHECKS ON BOOM AIR REFUELING SYSTEMS	97
G188 MONITOR FLIGHT INSTRUMENTS	97
G198 PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING	94
A5 DETERMINE WORK PRIORITIES	81

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN AFSC 1A071 AND AFSC 1A091 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	1A071 (N=227)	1A091 (N=32)	DIFFERENCE
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	14	59	-45
A22 SCHEDULE PERSONNEL FOR SCHOOLS, TEMPORARY DUTY (TDY) ASSIGNMENTS, OR NONTECHNICAL TRAINING	22	63	-41
C53 ANALYZE WORKLOAD REQUIREMENTS	10	50	-40
A10 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OIs), OR STANDARD OPERATING PROCEDURES (SOPs)	27	66	-39
A5 DETERMINE WORK PRIORITIES	43	81	-38
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	31	69	-38
B23 COMPILE INFORMATION FOR REPORTS OR STAFF STUDIES	32	69	-37
C56 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, RECLASSIFICATION, OR SPECIAL AWARDS	13	50	-37
B49 WRITE CORRESPONDENCE	38	75	-37
C57 EVALUATE INSPECTION REPORTS OR PROCEDURES	11	47	-36
A19 PLAN WORK ASSIGNMENTS, OTHER THAN FLIGHT SCHEDULES	31	66	-35
C75 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	9	44	-35
C58 EVALUATE JOB DESCRIPTIONS	6	41	-45
A21 SCHEDULE LEAVES OR PASSES	16	50	-34
A20 PREPARE JOB DESCRIPTIONS	10	44	-34
B29 DIRECT UTILIZATION OF PERSONNEL	26	59	-33
A7 DEVELOP ORGANIZATIONAL OR FUNCTIONAL CHARTS	12	44	-32
C73 PREPARE EPRS	11	41	-30
B38 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	41	69	-28
B46 SUPERVISE IN-FLIGHT REFUELING OPERATORS/TECHNICIANS (AFSC 1A071)	47	75	-28
B36 INITIATE PERSONNEL ACTION REQUESTS	7	34	-27
A14 PLAN FLIGHT SCHEDULES	32	59	-27
D96 ESTABLISH UNIT TRAINING STANDARDS	17	44	-27
C59 EVALUATE MAINTENANCE OR UTILIZATION OF WORKSPACE, EQUIPMENT, OR SUPPLIES	5	31	-26
A3 COORDINATE OPERATIONAL WORK ACTIVITIES WITH OTHER SECTIONS	53	78	-25
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	9	34	-25
A8 DEVELOP WORK METHODS OR PROCEDURES	35	59	-24
D97 EVALUATE INSTRUCTORS	33	56	-23
A6 DEVELOP COST REDUCTION PROGRAMS	8	31	-23

TABLE 15

## REPRESENTATIVE TASKS PERFORMED BY AFSC 1A000 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=15)
F170 PERFORM NORMAL GROUND CHECKLIST PROCEDURES	100
F172 PERFORM PASSENGER BRIEFINGS	100
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	100
G189 MONITOR FUEL PANELS	100
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR	100
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	100
G188 MONITOR FLIGHT INSTRUMENTS	100
G185 INFORM PILOTS OF REFUELING OPERATION STATUS	100
G191 PERFORM BOOM AIR REFUELING ABNORMAL PROCEDURES	100
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND EMERGENCY PROCEDURES	100
G187 MONITOR ENGINE INSTRUMENTS	100
G192 PERFORM BOOM SYSTEM EMERGENCY OPERATIONS	100
G206 PERFORM POSTDROGUE AIR REFUELING CHECKLIST PROCEDURES	100
G202 PERFORM OR PRACTICE IN-FLIGHT ABNORMAL PROCEDURES	100
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	93
E138 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	93
E127 MONITOR RADIO COMMUNICATIONS	93
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	93
G216 VERBALLY DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION	93
G182 ACT AS IN-FLIGHT SAFETY OBSERVER	93
G199 PERFORM OPERATIONAL CHECKS ON BOOM AIR REFUELING SYSTEMS	93
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	93
G194 PERFORM EMISSION CONTROL (EMCON) OPTION-1 AIR REFUELING	93
F159 BRIEF FLIGHT CREWS CONCERNING AIR REFUELING MISSION ACTIVITIES	93
E151 SECURE EQUIPMENT FOR FLIGHT OPERATIONS	93
E136 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS NORMAL BOOM AIR REFUELING	93
G195 PERFORM NORMAL GROUND CHECKLIST PROCEDURES	87
A3 COORDINATE OPERATIONAL WORK ACTIVITIES WITH OTHER SECTIONS	87
A5 DETERMINE WORK PRIORITIES	81



TABLE 16

TASKS WHICH BEST DIFFERENTIATE BETWEEN AFSC 1A091 AND AFSC 1A000 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	1A091 (N=32)	1A001 (N=15)	DIFFERENCE
H221 COMPUTE WEIGHT AND BALANCE CLEARANCE WITHOUT LOAD ADJUSTERS	91	60	31
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	69	40	29
H226 MARSHAL VEHICLES INSIDE AIRCRAFT	75	47	28
D83 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	34	7	27
E157 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	53	27	26
D80 CONDUCT PROFICIENCY TRAINING	66	40	26
D103 MAINTAIN TRAINING EQUIPMENT	25	0	25
E135 ORDER AIRCREW TRANSPORTATION	78	53	25
B48 UPDATE CONTINGENCY PLANS	31	7	24
E134 ORDER AIRCREW FLIGHT LUNCHES	97	73	24
H23 POSITION LOADERS OR ELEVATORS	69	47	22
D109 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	22	0	22
E155 TURN IN GALLEY EQUIPMENT	75	53	22
D91 DEVELOP LESSON PLANS	34	13	21
D108 PREPARE TRAINING SCHEDULES	34	13	21
C73 PREPARE EPRS	41	20	21
E141 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	94	73	21
F179 REPLENISH OIL OR HYDRAULIC FLUIDS	53	33	20
G206 PERFORM POSTDROGUE AIR REFUELING CHECKLIST PROCEDURES	81	100	-19
C52 ADMINISTER STANDARDIZATION BOARD CHECKS	19	40	-21
C51 ADMINISTER RECURRENCE CHECKS	25	47	-22
A18 PLAN STANDARDIZATION PROGRAMS	38	60	-22
G202 PERFORM OR PRACTICE IN-FLIGHT ABNORMAL PROCEDURES	75	100	-25
B41 MAINTAIN TO FILES	25	53	-28
G207 PERFORM REVERSE REFUELING	38	67	-29
C60 EVALUATE NEW SYSTEM DEVELOPMENTS, SUCH AS BOOM, DROGUE, OR RECEIVER EQUIPMENT	34	67	-35
B45 SUPERVISE IN-FLIGHT REFUELING OPERATORS/SUPERINTENDENTS (AFSC 1A091)	31	67	-36
C65 EVALUATE STANDARDIZATION PROGRAMS	28	67	-39
C50 ADMINISTER PROFICIENCY CHECKS	28	67	-39

### Summary

Three-skill level and 5-skill level airmen perform many tasks in common, and both groups spend the vast majority of their relative job time performing aircrew/In-Flight refueler/loadmaster tasks. While the 7-skill level personnel do perform some supervisory tasks, they spend the majority of their relative job time doing the same tasks that the apprentices and journeymen perform. Nine-skill level members and CEMs act as the managers of the career ladder.

## **ANALYSIS OF AFMAN 36-2108 SPECIALTY DESCRIPTIONS**

Survey data were compared to the AFMAN 36-2108, Specialty Descriptions, for In-Flight Refueling Operator/Technician effective 30 April 1991. The comparison revealed that all three documents (the 1-, 3-, and 5-skill levels; the 7-skill level; and the 9- and CEM Code-skill levels) are accurate depictions of the actual jobs and tasks performed in the career ladder.

## **TRAINING ANALYSIS**

One of the many sources of information which can be used to assist in the development of a relevant training program is occupational survey data. Factors used in evaluating training include the overall description of the job being performed by first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-job (1-24 months' TAFMS) or first-enlistment (1-48 months' TAFMS) members performing specific tasks, or using certain equipment or tools, as well as TE and TD ratings (previously explained in the SURVEY METHODOLOGY section).

To assist specifically in evaluation of the STS, personnel from HQ AETC/XOTA, Randolph AFB TX matched JI tasks to appropriate sections and subsections of the STS. This match between the STS and JI tasks provided the basis for a detailed analysis of the STS. A summary of this information is presented below.

### First-Enlistment Personnel

In this study, there are 112 members in their first enlistment (1-48 months TAFMS), representing 20 percent of the total survey sample. Tables 17 and 18 show that first-enlistment airmen are mainly involved in the air refueling activities, rather than the training/supervisory jobs.

**TABLE 17**

**RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY FIRST ENLISTMENT  
(1-48 MONTHS TAFMS) AFSC 1A0X1 PERSONNEL\*\***

<b>DUTIES</b>	<b>AVERAGE PERCENT TIME SPENT</b>
<b>A ORGANIZING AND PLANNING</b>	<b>*</b>
<b>B DIRECTING AND IMPLEMENTING</b>	<b>*</b>
<b>C INSPECTING AND EVALUATING</b>	<b>*</b>
<b>D TRAINING</b>	<b>*</b>
<b>E PERFORMING COMMON AIRCREW TASKS</b>	<b>36</b>
<b>F PERFORMING PREFLIGHT AND POSTFLIGHT FUNCTIONS</b>	<b>14</b>
<b>G PERFORMING IN-FLIGHT AIR REFUELING AND CRUISING FUNCTIONS</b>	<b>33</b>
<b>H PERFORMING LOADMASTER FUNCTIONS</b>	<b>16</b>

**\* Denotes less than 1 percent**

**\*\* Column may not add up to 100 percent due to rounding**

TABLE 18

**REPRESENTATIVE TASKS PERFORMED BY  
FIRST-ENLISTMENT AFSC 1A0X1 PERSONNEL**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING (N=112)</b>
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	100
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	99
G185 INFORM PILOTS OF REFUELING OPERATION STATUS	99
E128 OPEN OR CLOSE CREW ENTRANCE DOORS	99
E153 STUDY TOS FOR ABNORMAL, EMERGENCY GROUND, OR IN-FLIGHT PROCEDURES	99
F173 PERFORM SEXTANT PREFLIGHT CHECKS	99
E127 MONITOR RADIO COMMUNICATIONS	98
G195 PERFORM EMCON OPTION-2 AIR REFUELING	98
E138 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	98
G194 PERFORM EMISSION CONTROL (EMCON) OPTION-1 AIR REFUELING	98
G205 PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES	98
E137 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	98
G187 MONITOR ENGINE INSTRUMENTS	98
E134 ORDER AIRCREW FLIGHT LUNCHES	98
E130 OPERATE EMERGENCY ESCAPE HATCHES	98
G189 MONITOR FUEL PANELS	98
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	97
G198 PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING	97
E125 LOAD CREW GEAR ON AIRCRAFT	96
G188 MONITOR FLIGHT INSTRUMENTS	96
E141 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	96
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	96
G208 PERFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	96
E129 OPERATE AIRCRAFT RADIOS, SUCH AS INTERCOM, INTERPHONE, AFSATCOM, OR VHF	95
E156 TURN IN LIFE SUPPORT EQUIPMENT	95
G216 VERBALLY DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION	95
E151 SECURE EQUIPMENT FOR FLIGHT OPERATIONS	94
F175 POSITION PROFESSIONAL EQUIPMENT AT BOOM OPERATORS	94
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND EMERGENCY PROCEDURES	93
F159 BRIEF FLIGHT CREWS CONCERNING AIR REFUELING MISSION ACTIVITIES	91

Distribution of these personnel across the career ladder jobs is displayed in Figure 2, which further illustrates the point that the majority of first-enlistment airmen are associated with common aircrew and refueling duties. Table 8 displays some of the representative tasks performed by the group.

### TE and TD Data

TE and TD data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior NCOs working at operational units, are collected to provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel training (TE) (see Table 19 for the top-rated tasks), along with a measure of the difficulty of the JI tasks (TD) (see the highest rated tasks presented in Table 20). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can then be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor rating lows, but percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

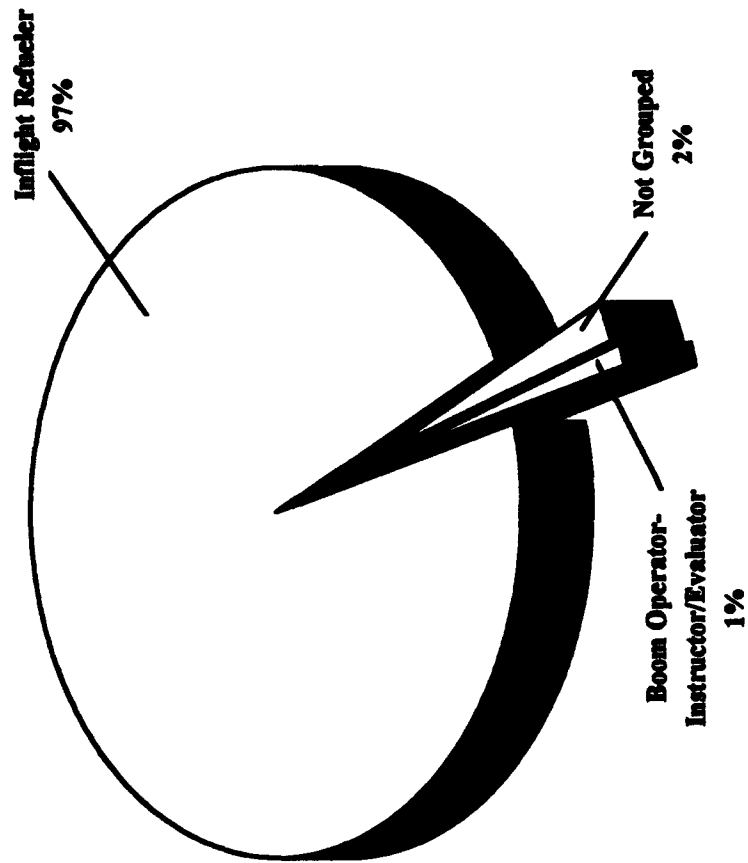
To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors, and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, ATCR 52-22, and allow course personnel to quickly focus their attention on those tasks which are most likely to qualify for basic resident course (ABR) consideration.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate, ATI information, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the SURVEY METHODOLOGY section of this report.)

### Specialty Training Standard (STS)

A comprehensive review of STS 1A0X1 (112X0), dated August 1991, compared STS items to survey data. Task knowledge and performance elements of the STS were compared against the standard set forth in AETCR 52-22, paragraph 3b (2), (i.e., STS entries matched to tasks performed by 20 percent first-job, first-enlistment, 5-skill level, or 7-skill level respondents should be retained.)

# **JOBS PERFORMED BY AFSC 1A0X1 FIRST-ENLISTMENT PERSONNEL**



**FIGURE 2**

TABLE 19

## TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING		TASK DIFF
		1ST JOB	1ST ENL	
H238 SECURE CARGO	7.43	96	98	6.09
E120 DEMONSTRATE TO PASSENGERS THE PROPER USE OF LIFE SUPPORT EQUIPMENT	7.38	94	96	4.72
G208 PREFORM PREPARATION FOR CONTACT CHECKLIST PROCEDURES FOR NORMAL BOOM AIR REFUELING	7.38	94	96	4.97
H239 SUPERVISE LOAD TEAMS	7.32	78	85	5.87
G211 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING NORMAL SYSTEMS	7.22	98	99	5.73
H219 COMPUTE CARGO RESTRAINT REQUIREMENTS	7.19	98	97	6.07
G212 REFUEL RECEIVER AIRCRAFT WITH BOOM REFUELING TANKER MANUAL AIR REFUELING	7.16	96	97	6.08
E126 MAINTAIN CURRENCY OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, OR FLIGHT CREW CHECKLISTS	7.14	94	96	4.91
G191 PERFORM BOOM AIR REFUELING ABNORMAL PROCEDURES	7.08	94	96	6.08
E130 OPERATE EMERGENCY ESCAPE HATCHES	7.08	98	98	3.99
G210 PREPARE FOR CONTACT CHECKLIST PROCEDURES FOR TANKER MANUAL AIR REFUELING	7.05	96	97	5.07
G204 PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES	7.00	98	97	5.37
G184 DIRECT RECEIVER AIRCRAFT INTO REFUELING POSITION USING PILOT DIRECTOR LIGHTS	6.97	100	100	5.14
H229 PERFORM LOAD PLANNING FOR CARGO OR PASSENGER MISSIONS	6.95	94	94	5.92
H240 SUPERVISE PASSENGERS ON MISSIONS	6.95	94	96	4.64
H227 OPERATE CARGO LOADING EQUIPMENT	6.92	43	53	5.34
H223 DIRECT PASSENGERS LOADING OR UNLOADING	6.89	96	98	5.06
G192 PERFORM BOOM SYSTEMS EMERGENCY OPERATIONS	6.89	88	90	6.32
G203 PERFORM OR PRACTICE IN-FLIGHT EMERGENCY PROCEDURES	6.86	90	92	5.64
E124 INSTRUCT CREW MEMBERS OR PASSENGERS ON IN-FLIGHT OR GROUND EMERGENCY PROCEDURES	6.86	90	93	4.99
H232 POSITION CARGO IN AIRCRAFT	6.84	96	97	5.82

TABLE 20

## TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS	PERCENT MEMBERS PERFORMING					
	TSK	1ST	1ST	AFSC	AFSC	TNG
	DIFF	JOB	ENL	1A031	1A071	EMP
C75	6.91	0	2	2	9	.65
B42	6.75	4	4	20	51	4.16
D92	6.69	0	1	3	9	1.35
D91	6.63	0	1	14	28	2.59
D101	6.62	0	0	0	6	.95
A9	6.62	0	2	1	10	.11
A14	6.56	0	2	9	32	1.97
E144	6.49	10	13	13	16	1.43
D93	6.39	0	1	9	17	2.59
H221	6.34	73	71	77	81	6.73
ADJUSTERS						
G192	6.32	88	90	87	88	6.89
C71	6.31	0	0	0	3	1.05
B23	6.28	2	2	7	32	1.70
C74	6.26	0	0	0	0	.08
A10	6.25	0	0	5	27	1.38
STANDARD OPERATING PROCEDURES (SOPs)						
A18	6.25	0	0	2	23	1.54
H218	6.24	49	53	53	64	5.73
E143	6.17	22	22	19	20	2.11
A6	6.16	0	1	1	8	.49
D85	6.16	0	2	14	30	1.92



Overall, the STS provides comprehensive coverage of the work performed by personnel in this career ladder. Even though most elements did not have high percentages of year or skill-level groups performing matched tasks, the fact that the matched tasks were a part of an identifiable job being performed in the career ladder supports the retention of the STS element involving those tasks. Tasks not matched to any element of the STS are listed in Table 21. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. No particular trends were noted, indicating the STS adequately covers the work performed by the In-Flight Refueling Specialty. The data should provide a sound basis for periodic review of training.

## **JOB SATISFACTION ANALYSIS**

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of career ladder member job satisfaction. Table 25 presents job satisfaction data for AFSC 1A0X1 TAFMS groups, together with data for a comparative sample of Aircrew Operations career ladders surveyed in 1993. These data can give a relative measure of how the job satisfaction of AFSC 1A0X1 personnel compares with other similar Air Force specialties. Review of Table 22 reflects that responses from AFSC 1A0X1 TAFMS groups regarding job interest, use of talents, use of training, and reenlistment intentions are all quite positive and are generally higher than nearly all of the comparative groups. The first-enlistment personnel responded more positively than the comparative sample, which was comprised of data from AFSCs 1T2X1, 1A4X1, and 1A5X3. Second-enlistment and career-year groups responded almost as positively as the first-enlistment personnel across all comparative factors. It is obvious that AFSC 1A0X1 personnel are overwhelmingly satisfied in their respective careers.

An indication of how job satisfaction perceptions have changed over time is provided in Table 23, where TAFMS group data for 1993 survey respondents are presented, along with data from respondents to the last occupational survey involving this career ladder, published in 1983. Comparison of job satisfaction indicator responses of current survey TAFMS groups to those in the 1983 survey (see Table 21) indicates that positive responses are almost all higher than those for 1983 corresponding groups. Noteworthy positive increases occurred in the first and second enlistment under the Perceived Use of Talent heading. In the 97+ months TAFMS group, however, there was an increase in intent to retire at the end of the current enlistment.

The differences in job satisfaction between jobs were slight (see Table 24). Incumbents in the Senior Program Manager, Flight Mission Scheduler, and Command Evaluator jobs saw their jobs as interesting; Ground Schedulers reported more than any other incumbents that their job was dull. Ground Schedulers also felt (more than all other incumbents) that their job did not utilize their talents or training. The job group expressing the highest interest in reenlisting was the

TABLE 21

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE AFSC 1A0X1  
GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING					TNG EMP**	TASK DIFF**
	1ST	DAFSC	DAFSC	(N=227)			
	ENL	1A051	1A071				
	(N=112)	(N=232)					
G212	97	97	94	94	7.16	6.08	
G207	54	49	47	47	4.81	5.93	
H239	85	88	92	92	7.32	5.87	
F174	95	92	83	83	4.32	5.67	
H220	61	51	47	47	4.86	5.41	
G204	97	97	94	94	7.00	5.37	
H226	68	66	62	62	5.30	5.32	
G198	97	92	95	95	6.49	5.16	
E145	61	62	55	55	3.00	4.98	
G205	98	97	96	96	6.73	4.78	
G188	96	95	96	96	6.19	4.65	
G187	98	96	95	95	5.89	4.41	
E140	83	74	68	68	4.19	3.77	
E133	96	94	93	93	4.65	2.83	
E149	95	92	85	85	2.70	2.42	
JUGS							
E155	90	80	70	70	1.97	2.29	
E134	98	92	91	91	2.95	2.17	
E135	70	77	68	68	2.51	2.14	
ORDER AIRCREW TRANSPORTATION							
ORDER AIRCREW FLIGHT LUNCHES							
TURN IN GALLEY EQUIPMENT							
PICK UP AND INSPECT FLIGHT LUNCHES OR GALLEY EQUIPMENT, SUCH AS COFFEE							
OPERATE GALLEY EQUIPMENT							
PARTICIPATE IN PREMISSION OR POSTFLIGHT INTELLIGENCE BRIEFINGS							
MONITOR ENGINE INSTRUMENTS							
MONITOR FLIGHT INSTRUMENTS							
PERFORM POSTBOOM AIR REFUELING CHECKLIST PROCEDURES							
PERFORM HIGH ALTITUDE PROCEDURES IN ALTITUDE CHAMBER							
PERFORM NORMAL IN-FLIGHT CHECKLISTS, OTHER THAN AIR REFUELING							
MARSHAL VEHICLES INSIDE AIRCRAFT							
PERFORM OR PRACTICE TANKER AIR REFUELING BREAKAWAY PROCEDURES							
COMPUTE WEIGHT AND BALANCE CLEARANCE WITH LOAD ADJUSTERS							
PERFORM USE OF AIRCREW CHEMICAL DEFENSE EQUIPMENT (ACDE)							
SUPERVISE LOAD TEAMS							
PERFORM REVERSE REFUELING							
REFUEL RECEIVER AIRCRAFT WITH BOOM REUELING MANUAL OPERATIONS							

\* Training Emphasis has an average of 3.50 and a Standard Deviation of 2.52 (High TE=5.76)

\*\* Average TD rating is 5.00, and the Standard Deviation is 1.00

TABLE 22

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 1A0X1  
TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE  
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1A0X1 (N=112)	AIRCREW (N=43)	1A0X1 (N=129)	AIRCREW (N=85)	1A0X1 (N=308)	AIRCREW (N=85)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	1	5	2	7	4	7
SO-SO	4	9	1	13	6	11
INTERESTING	96	86	98	80	91	82
<u>PERCEIVED USE OF TALENTS:</u>						
NONE TO VERY LITTLE	5	18	4	22	7	16
FAIRLY WELL TO PERFECT	95	81	96	78	92	84
<u>PERCEIVED USE OF TRAINING</u>						
NONE TO VERY LITTLE	0	5	2	12	6	16
FAIRLY WELL TO PERFECT	100	95	98	88	93	84
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>						
DISSATISFIED	4	12	1	23	8	18
NEUTRAL	3	9	2	5	7	6
SATISFIED	94	79	97	72	85	75
<u>REENLISTMENT INTENTIONS:</u>						
WILL RETIRE	0	0	0	0	19	15
NO OR PROBABLY NO	22	23	11	29	5	11
YES OR PROBABLY YES	77	78	89	71	76	74

\* Denotes less than 1 percent

\*\* Columns may not add up to 100 percent due to rounding or nonresponse

NOTE: Comparative data are from AFSCs 1A5X3, 1A4X1, and 1T2X1 (1993)

TABLE 23

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 1A0X1  
TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY  
(PERCENT MEMBERS RESPONDING)\*\*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1A0X1 (N=112)	112X0 (N=148)	1A0X1 (N=129)	112X0 (N=202)	1A0X1 (N=308)	112X0 (N=415)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	1	2	2	3	4	1
SO-SO	4	3	1	4	6	4
INTERESTING	96	95	98	92	91	91
<u>PERCEIVED USE OF TALENTS:</u>						
NONE TO VERY LITTLE	5	14	4	9	7	5
FAIRLY WELL TO PERFECT	95	84	96	91	92	94
<u>PERCEIVED USE OF TRAINING:</u>						
NONE TO VERY LITTLE	*	3	2	4	6	7
FAIRLY WELL TO PERFECT	100	95	98	95	93	92
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>						
DISSATISFIED	4	5	1	6	8	7
NEUTRAL	3	6	2	2	7	5
SATISFIED	94	88	97	92	85	87
<u>REENLISTMENT INTENTIONS</u>						
WILL RETIRE	*	*	*	1	19	8
NO OR PROBABLY NO	22	32	11	12	5	4
YES OR PROBABLY YES	77	67	89	87	76	87

\* Denotes less than 1 percent

\*\* Columns may not add up to 100 percent due to rounding or nonresponse

TABLE 24

**JOB SATISFACTION INDICATORS FOR AFSC 1A0X1 JOBS  
(PERCENT MEMBERS RESPONDING)\*\***

	IN-FLIGHT REFUELER (ST0063)	BOOM OPERATOR- INSTRUCTOR/ EVALUATOR (ST0061)	FLIGHT MISSION SCHEDULER (ST0069)	COMMAND EVALUATOR (ST0077)	CCTS FLIGHT INSTRUCTOR (ST0075)
<u>EXPRESSED JOB INTEREST:</u>					
INTERESTING	96	93	100	100	89
SO-SO	3	4	0	0	11
DULL	1	4	0	0	0
<u>PERCEIVED USE OF TALENTS:</u>					
NONE TO VERY LITTLE	4	5	0	13	0
FAIRLY TO VERY WELL	59	50	57	38	44
EXCELLENT TO PERFECT	37	44	43	50	56
<u>PERCEIVED USE OF TRAINING:</u>					
NONE TO VERY LITTLE	4	2	0	0	13
FAIRLY WELL TO PERFECT	42	37	71	0	13
EXCELLENT TO PERFECT	53	61	29	100	75
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>					
SATISFIED	92	89	86	75	89
NEUTRAL	4	8	0	0	11
DISSATISFIED	4	3	14	25	0
<u>REENLISTMENT INTENTIONS:</u>					
WILL RETIRE	6	17	14	13	11
NO OR PROBABLY NO	12	7	0	13	0
YES OR PROBABLY YES	82	76	86	75	89

TABLE 24 (CONTINUED)

**JOB SATISFACTION INDICATORS FOR AFSC 1A0X1 JOBS  
(PERCENT MEMBERS RESPONDING)\*\***

	SENIOR PROGRAM MANAGER (ST0020)	IN-FLIGHT REFUELING PROGRAM MANAGER (ST0030)	FLIGHT CHIEF (ST0047)	GROUND SCHEDULING (ST0054)
<u>EXPRESSED JOB INTEREST:</u>				
INTERESTING	100	95	83	60
SO-SO	0	5	17	0
DULL	0	0	0	40
<u>PERCEIVED USE OF TALENTS:</u>				
NONE TO VERY LITTLE	0	0	17	40
FAIRLY TO VERY WELL	67	62	33	20
EXCELLENT TO PERFECT	33	38	38	40
<u>PERCEIVED USE OF TRAINING:</u>				
NONE TO VERY LITTLE	0	0	0	40
FAIRLY WELL TO PERFECT	83	43	50	40
EXCELLENT TO PERFECT	17	57	50	20
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>				
DISSATISFIED	100	86	83	80
SATISFIED	0	14	0	20
NEUTRAL	0	0	17	0
<u>REENLISTMENT INTENTIONS:</u>				
WILL RETIRE	17	10	67	20
NO OR PROBABLY NO	0	5	0	40
YES OR PROBABLY YES	83	86	33	40

CCTS Flight Instructor job. The personnel expressing the least intent to reenlist were the Ground Scheduler incumbents. All jobs reported that they felt a sense of satisfaction from their work (the lowest positive indicator was 75 percent).

When there are serious problems in a career ladder, survey respondents are usually quite free with write-in comments to complain about perceived problems in the field. Eighteen percent of the survey sample used the write-in feature to convey some type of information, yet only 12 percent of the comments received (representing less than 2 percent of the total sample) could be characterized as complaints.

All of the write-in comments were about the JI, and not the career field. Most of the comments focused on how the word "average" was used to relate to time spent performing tasks.

### **IMPLICATIONS**

This survey was intended to review the structure of the career ladder and to provide information to help direct potential training and organizational changes. The condition of the career field is very stable, from the structure, to the training, to the job satisfaction of the incumbents.

There are nine jobs in the career ladder, with a normal pattern of a decreasing number of personnel in jobs with more responsibility, with these individuals also having a greater TAFMS. With the reorganization of the Air Force, the initial training will change to include loadmaster training, but past that, there is expected to be very little change. As was true in the March 1983 OSR, job satisfaction in the In-Flight Refueling career ladder continues to be very high.

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## **APPENDIX A**

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TABLE A1

## SENIOR PROGRAM MANAGER

TASKS	PERCENT MEMBERS PERFORMING
B49 Write correspondence	100
A13 Plan briefings	100
G200 Perform operational checks on drogue air refueling systems	100
G199 Perform operational checks on boom air refueling systems	100
G213 Refuel receiver aircraft with drogue	100
E139 Participate in life support training seminars	100
F161 Coordinate operational work with other crew members	100
F170 Perform normal ground checklist procedures	100
E126 Maintain currency of flight manuals, safety and operational supplements, or flight crew checklists	100
G189 Monitor fuel panels	100
E138 Participate in general or specialized mission briefings	100
G195 Perform EMCON option-2 air refueling	100
G208 Perform preparation for contact checklist procedures for normal boom air refueling	100
G205 Perform postboom air refueling checklist procedures	100
G182 Act as in-flight safety observer	100
E127 Monitor radio communications	100
E128 Open or close crew entrance doors	100
E137 Participate in crew operation debriefings	100
G198 Perform normal in-flight checklists, other than air refueling	100
G211 Refuel receiver aircraft with boom refueling normal systems	100
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
G188 Monitor flight instruments	100
E151 Secure equipment for flight operations	100
E153 Study TOs for abnormal, emergency ground, or in-flight procedures	100
G187 Monitor engine instruments	100
F185 Inform pilots of refueling operation status	100
F178 Remove or replace fuses or bulbs	100
G186 Interpret and use radio silent signals	100
G193 Perform drogue air refueling abnormal procedures	100

TABLE A2

## INFLIGHT REFUELING PROGRAM MANAGER

TASK	PERCENT MEMBERS PERFORMING
E127 Monitor radio communications	100
G195 Perform EMCON option-2 air refueling	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
E153 Study TOs for abnormal, emergency ground, or in-flight procedures	100
E126 Maintain currency of flight manuals, safety and operational supplements, or flight crew checklists	100
G205 Perform postboom air refueling checklist procedures	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
E151 Secure equipment for flight operations	100
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	100
H239 Supervise load teams	100
G194 Perform emission control (EMCON) option-1 air refueling	100
G185 Inform pilots of refueling operation status	100
E138 Participate in general or specialized mission briefings	100
G186 Interpret and use radio silent signals	100
H240 Supervise passengers on missions	100
H229 Perform load planning for cargo or passenger missions	100
E128 Open or close crew entrance doors	100
F159 Brief flight crews concerning air refueling mission activities	100
H232 Position cargo in aircraft	100
E136 Participate in crew maintenance debriefings	100
A11 Establish performance standards for subordinates	95
G211 Refuel receiver aircraft with boom refueling normal systems	95
G182 Act as in-flight safety observer	95
G189 Monitor fuel panels	95
G208 Perform preparation for contact checklist procedures for normal boom air refueling	95
G187 Monitor engine instruments	95
E137 Participate in crew operation debriefings	95
E121 Inspect personal equipment	95
H238 Secure cargo	95
F170 Perform normal ground checklist procedures	95

**TABLE A3**  
**FLIGHT CHIEF**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
H232 Position cargo in aircraft	100
H224 Inspect cargo for air transport	100
E120 Demonstrate to passengers the proper use of life support equipment	100
H223 Direct passengers loading or unloading	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
H239 Supervise load teams	100
H217 Brief load team personnel	100
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	100
E127 Monitor radio communications	100
H240 Supervise passengers on missions	100
H236 Prepare aircraft for loading or unloading passengers	100
E119 Coordinate corrections of aircraft discrepancies or malfunctions with aircraft commanders	100
B44 Supervise In-Flight Refueling Operators (AFSC 11250)	100
E153 Study TOs for abnormal, emergency ground, or in-flight procedures	100
H238 Secure cargo	100
G185 Inform pilots of refueling operation status	100
E114 Advise maintenance personnel in identifying aircraft systems malfunctions	100
H235 Prepare aircraft for loading or unloading cargo	100
F172 Perform passenger briefings	100
G195 Perform EMCON option-2 air refueling	100
H222 Determine cargo for hazardous compatibility	100
E137 Participate in crew operation debriefings	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
E138 Participate in general or specialized mission briefings	100
G187 Monitor engine instruments	100
H234 Position loaders or elevators	100
E118 Attend aircrew refresher training	100
H237 Review preload cargo and passenger manifests	100
H219 Compute cargo restraint requirements	100
G188 Monitor flight instruments	100

**TABLE A4**  
**GROUND SCHEDULING**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
E127 Monitor radio communications	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
G190 Operate air-conditioning controls	100
A3 Coordinate operational work activities with other sections	100
E151 Secure equipment for flight operations	100
E128 Open or close crew entrance doors	100
G182 Act as in-flight safety observer	100
F159 Brief flight crews concerning air refueling mission activities	100
G189 Monitor fuel panels	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
G211 Refuel receiver aircraft with boom refueling normal systems	100
G195 Perform EMCON option-2 air refueling	100
E137 Participate in crew operation debriefings	100
G185 Inform pilots of refueling operation status	100
G208 Perform preparation for contact checklist procedures for normal boom air refueling	100
G187 Monitor engine instruments	100
G188 Monitor flight instruments	100
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	100
E150 Pick up life support equipment	100
G198 Perform normal in-flight checklists, other than air refueling	100
F170 Perform normal ground checklist procedures	100
G210 Prepare for contact checklist procedures for tanker manual air refueling	100
G205 Perform postboom air refueling checklist procedures	100
E121 Inspect personal equipment	100
G199 Perform operational checks on boom air refueling systems	100
G212 Refuel receiver aircraft with boom refueling tanker manual operations	100
G186 Interpret and use radio silent signals	100
E138 Participate in general or specialized mission briefings	100
E136 Participate in crew maintenance debriefings	100
E156 Turn in life support equipment	100

TABLE A5

## BOOM OPERATOR-INSTRUCTOR/EVALUATOR

TASKS	PERCENT MEMBERS PERFORMING
E127 Monitor radio communications	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
E128 Open or close crew entrance doors	100
G211 Refuel receiver aircraft with boom refueling normal systems	100
H240 Supervise passengers on missions	100
G186 Interpret and use radio silent signals	100
G205 Perform postboom air refueling checklist procedures	100
E133 Operate galley equipment	100
F172 Perform passenger briefings	100
G182 Act as in-flight safety observer	99
G188 Monitor flight instruments	99
E138 Participate in general or specialized mission briefings	99
H232 Position cargo in aircraft	99
E126 Maintain currency of flight manuals, safety and operational supplements, or flight crew checklists	99
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	99
H235 Prepare aircraft for loading or unloading cargo	99
G199 Perform operational checks on boom air refueling systems	99
G204 Perform or practice tanker air refueling breakaway procedures	99
G216 Verbally direct receiver aircraft into refueling position	99
H238 Secure cargo	99
G195 Perform EMCON option-2 air refueling	99
G187 Monitor engine instruments	99
H239 Supervise load teams	99
E137 Participate in crew operation debriefings	99
H231 Periodically check cargo restraints	99
H236 Prepare aircraft for loading or unloading passengers	99
G212 Refuel receiver aircraft with boom refueling tanker manual operations	99
G194 Perform emission control (EMCON) option-1 air refueling	99
E134 Order aircrew flight lunches	98

**TABLE A6**  
**IN-FLIGHT REFUELER**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
G184 Direct receiver aircraft into refueling position using pilot director lights	99
E127 Monitor radio communications	99
E128 Open or close crew entrance doors	99
G211 Refuel receiver aircraft with boom refueling normal systems	99
H223 Direct passengers loading or unloading	99
G195 Perform EMCON option-2 air refueling	98
G205 Perform postboom air refueling checklist procedures	98
F172 Perform passenger briefings	98
E138 Participate in general or specialized mission briefings	98
H238 Secure cargo	98
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	98
E137 Participate in crew operation debriefings	98
E126 Maintain currency of flight manuals, safety and operational supplements, or flight crew checklists	98
G204 Perform or practice tanker air refueling breakaway procedures	98
H219 Compute cargo restraint requirements	97
G212 Refuel receiver aircraft with boom refueling tanker manual operations	97
G210 Prepare for contact checklist procedures for tanker manual air refueling	97
E120 Demonstrate to passengers the proper use of life support equipment	97
H232 Position cargo in aircraft	97
E125 Load crew gear on aircraft	97
G185 Inform pilots of refueling operation status	97
G198 Perform normal in-flight checklists, other than air refueling	97
G187 Monitor engine instruments	97
E136 Participate in crew maintenance debriefings	97
G194 Perform emission control (EMCON) option-1 air refueling	97
H240 Supervise passengers on missions	97
G188 Monitor flight instruments	96
F175 Position professional equipment at boom operators forward stations	96
G186 Interpret and use radio silent signals	96
H236 Prepare air craft for loading or unloading passengers	96



**TABLE A7**  
**FLIGHT MISSION SCHEDULER**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
G198 Perform normal in-flight checklists, other than air refueling	100
G195 Perform EMCON option-2 air refueling	100
G182 Act as in-flight safety observer	100
G211 Refuel receiver aircraft with boom refueling normal systems	100
F170 Perform normal ground checklist procedures	100
G204 Perform or practice tanker air refueling breakaway procedures	100
G188 Monitor flight instruments	100
G185 Inform pilots of refueling operation status	100
G208 Perform preparation for contact checklist procedures for normal boom air refueling	100
G189 Monitor fuel panels	100
G186 Interpret and use radio silent signals	100
G199 Perform operational checks on boom air refueling systems	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
G205 Perform postboom air refueling checklist procedures	100
G187 Monitor engine instruments	100
E153 Study TOs for abnormal, emergency ground, or in-flight procedures	100
E138 Participate in general or specialized mission briefings	100
E137 Participate in crew operation debriefings	100
E125 Load crew gear on aircraft	100
G194 Perform emission control (EMCON) option-1 air refueling	100
E151 Secure equipment for flight operations	
G212 Refuel receiver aircraft with boom aircraft with boom refueling tanker manual operations	100
G216 Verbally direct receiver aircraft into refueling position	100
G210 Prepare for contact checklist procedures for tanker manual air refueling	100
E130 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
E127 Monitor radio communications	100
E128 Open or close crew entrance doors	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
F173 Perform sextant preflight checks	100
F141 Participate in permission weather briefings	100

TABLE A8

## CCTS FLIGHT INSTRUCTOR

TASKS	PERCENT MEMBERS PERFORMING
G182 Act as in-flight safety observer	100
G194 Perform emission control (EMCON) option-1 air refueling	100
E138 Participate in general or specialized mission briefings	100
E153 Study TOs for abnormal, emergency ground, or in-flight procedures	100
G189 Monitor fuel panels	100
E126 Maintain currency of flight manuals, safety and operational supplements, or flight crew checklists	100
F159 Brief flight crews concerning air refueling mission activities	100
G204 Perform or practice tanker air refueling breakaway procedures	100
E129 Operate aircraft radios, such as intercom, interphone, AFSATCOM, or VHF	100
D76 Administer tests	100
G188 Monitor flight instruments	100
E151 Secure equipment for flight operations	100
E136 Participate in crew maintenance debriefings	100
G185 Inform pilots of refueling operation status	100
E141 Participate in permission weather briefings	100
G198 Perform normal in-flight checklists, other than air refueling	100
G190 Operate air-conditioning controls	100
G192 Perform boom system emergency operations	100
G191 Perform boom air refueling abnormal procedures	100
G202 Perform or practice in-flight abnormal procedures	100
G187 Monitor engine instruments	100
E128 Open or close crew entrance doors	100
E130 Operate emergency escape hatches	100
G216 Verbally direct receiver aircraft into refueling position	100
F163 Inspect or operate auxiliary power units	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
G205 Perform postboom air refueling checklist procedures	100
F173 Perform sextant preflight checks	100
G203 Perform or practice in-flight emergency procedures	100
G199 Perform operational checks on boom air refueling systems	100

**TABLE A9**  
**COMMAND EVALUATOR**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
G182 Act as in-flight safety observer	100
D97 Evaluate instructors	100
G211 Refuel receiver aircraft with boom refueling normal systems	100
G189 Monitor fuel panels	100
C50 Administer proficiency checks	100
G184 Direct receiver aircraft into refueling position using pilot director lights	100
G195 Perform EMCON option-2 air refueling	100
E127 Monitor radio communications	100
E125 Load crew gear on aircraft	100
G208 Perform preparation for contact checklist procedures for normal boom air refueling	100
G188 Monitor flight instruments	100
G187 Monitor engine instruments	100
G205 Perform postboom air refueling checklist procedures	100
E128 Open or close crew entrance doors	100
G198 Perform normal in-flight checklists, other than air refueling	100
E124 Instruct crew members or passengers on in-flight or ground emergency procedures	100
E130 Operate emergency escape hatches	100
F170 Perform normal ground checklist procedures	100
G212 Refuel receiver aircraft with boom refueling tanker manual operations	100
G185 Inform pilots of refueling operation status	100
G199 Perform operational checks on boom air refueling systems	100
G204 Perform or practice tanker air refueling breakaway procedures	100
F138 Participate in general or specialized mission briefings	100
E141 Participate in permission weather briefings	100
G186 Interpret and use radio silent signals	100
E120 Demonstrate to passengers the proper use of life support equipment	100
E150 Pick up life support equipment	100
E156 Turn in life support equipment	100
E137 Participate in crew operation debriefings	100
H240 Supervise passengers on missions	100